Wet Rot of Vegetable Crops

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Cause and Symptoms

Wet rot, also known as blossom blight or whisker rot of vegetable crops, is primarily a disease of flower parts and fruit. Squash, okra, southern peas and sometimes cucumbers and peppers are the chief vegetables affected. Other hosts of this disease include althea (Rose-of-Sharon), hibiscus, cotton and peanut. Yellow summer squash types seem to be more susceptible than other squash types. Southern pea cultivars that are prone to lodging or that produce pods a short distance above the ground are more susceptible to wet rot.

This disease is caused by the fungus *Choanephora cucurbitarum*. It may be classed as a weak parasite since fruit invasion follows passively after fungal colonization of spent flower parts (petals and sepals) or behind insect injury. Spores of the causal fungus have been shown to over-season in soil and in association with susceptible crop debris. Wind dissemination of spores has been implicated and is thought to be responsible for transportation of the primary inocula (spores) of this fungus onto squash. Secondary spread of this disease in the field has been attributed to movement of spores by various insects as well as wind. Bees and the striped and spotted cucumber beetles move spores of this fungus from flower to flower in the squash crop. With southern peas, wet rot incidence has been highly correlated with cowpea cuculio injury. Dense plantings of southern peas favor high populations of the cowpea cuculio and subsequently have a higher wet rot incidence. Puncture wounds from cuculio feeding are thought to provide additional avenues of entry for the causal fungus.

Wet rot is most severe during warm, excessively wet periods. With southern peas, for instance, dry weather limits this disease to the corolla of the flower. Wet weather results in progression of disease from the flower to the pod and often to the peduncle. Symptoms of wet rot are similar on all crops. Flower infection prior to pollination produces a blossom blight. However, it is more common to see the fungus colonize flower parts after fruit set. The dark grey to black mold is first to appear on flower parts (Fig. 1). Later the fungus advances into the fruit. (Figs. 2 & 3). The fungus produces a profusion of black spheres (sporangia) and eventually rot progresses into the fruit. Wet rot can be a postharvest problem, occasionally, especially on southern peas.

Control

Control of wet rot is difficult. However, certain measures can be used to reduce this problem. 1) Plant on well drained soils. 2) Avoid excessive plant populations. 3) When spraying fungicides use a nozzle arrangement and spray pressure that will deposit spray within the canopy 4) On southern pea, maintain adequate control of the cowpea cuculio. 5) In small plantings or gardens, hand removal of flower

parts, particularly squash, after fruit set will reduce this problem. 6) Avoid picking southern peas when they are green and storing them under wet conditions.

Figure 1. Wet rot fungus on okra flower.

Figure 2. Wet rot fungus on southern pea pod.

Figure 3. Wet rot fungus on squash fruit.